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## EDUCATION

1/1992 B.A., Tel Aviv University, Tel Aviv, Israel. Majors: Psychology and French (Cum Laude).  
8/1999 Ph.D., Dept. of Psychology, Health Clinical track, Univ. of Miami, FL (Award of Academic Merit).

## CONTINUING EDUCATION

1/2001 Psychology license, New York State (#014670).  
8/2001 Cellular Biology of Addiction, Cold Spring's Harbor Laboratory, Huntington, NY.  
7/2002 Technology Challenges and Requirements to Support Drug Abuse Prevention and Treatment Research, Sponsored by Office of National Drug Control Policy and NIDA, Cambridge, MA.

## ACADEMIC APPOINTMENTS

1992 Research Assistant (RA), Neuropsychology Laboratory (Developmental Neuropsychology Lab. and Neuropsychology of Aging Lab.), Memphis State University, Memphis, TN.  
1992-1994 RA, Dept. of Neurology and Epilepsy Center, Miami Children's Hospital, Coral Gables, FL.  
1994-1998 RA, Dept. of Psychology and Behavioral Medicine, Univ. of Miami, Coral Gables, FL.  
1998 Clinical Psychologist, Global Communications Services (community housing for mentally-retarded individuals), New Hyde Park, NY.  
1998 - 1999 Intern in Clinical Neuropsychology, Long Island Jewish Medical Center and Hillside Hospital, New Hyde Park, NY.  
1999 - 2002 Post-doctorate research associate, training fellowship on Brain Imaging and Alcohol Abuse from the NIH, State University of NY at Stony Brook and Brookhaven National Laboratory, Upton, NY.  
2001 Adjunct, Dept. of Psychology, State University of NY at Stony Brook.  
4/02 – 9/04 Assistant Scientist, Medical Research, Brookhaven National Laboratory, Upton, NY  
2002 - Affiliate, Dept. of Psychology, State University of NY at Stony Brook.  
2003 - Affiliate, Dept. of Biomedical Engineering, State University of NY at Stony Brook.  
10/04 – 09/06 Associate Scientist, Medical Research, Brookhaven National Laboratory, Upton, NY  
10/06 - Scientist, Medical Research, Brookhaven National Laboratory, Upton, NY

## HONORS AND AWARDS

1994 – 1998 Graduate Research Assistantships, University of Miami, FL.  
1994 – 1998 Letters of Commendation, Department of Psychology, University of Miami, FL.  
1997 – 1998 Graduate student travel scholarships, the Max and Peggy Kriloff scholarship and U of Miami, FL.  
1998 Stanley Foundation Scholarship for research, Hillside Hospital, NY.  
2003 – present Mentored Patient-Oriented Research Career Development Award (K-23), NIDA.  
2003 – present Young Investigator Award, National Alliance for Research on Schizophrenia And Depression.  
3/22/2005 Woman of the Year in Science, Brookhaven Town Award.

## PROFESSIONAL ACTIVITIES: REVIEWER IN PEER REVIEWED JOURNALS

2002 - present Psychiatry Research; Neuroimaging; Journal of Psychopharmacology; NeuroImage.  
2003 - present Archives of General Psychiatry; American Journal of Psychiatry; Neuropsychologia.  
2004 – present Biological Psychiatry; The Journal of Neuropsychiatry and Clinical Neurosciences; European Journal of Neuroscience; Neuropsychopharmacology; IJ Neuropsychopharmacology.  
2005 – present Nature Neuroscience; Psychopharmacology.  
2006 – present Drug and Alcohol Dependence; Neuroscience & Biobehavioral Reviews.

## PROFESSIONAL ACTIVITIES: EDITORIAL BOARD

2008 – Member of the International Editorial Advisory Board, Current Drug Abuse Reviews, a peer-reviewed journal, launched in 2008 by Bentham Science Publishers.

## PROFESSIONAL ACTIVITIES: NIH REVIEWER

2005 – present National Institute on Drug Abuse (NIDA) initiative in brain imaging/clinical neurobiology research,

July, 2005 Imaging - Science Track Award for Research Transition Program (I/START).  
NIH/CSR, Special Emphasis Panel (ZRG1 BBP-C), Cognition and Perception Study Section  
(formerly BBBP-4).

### PROFESSIONAL ACTIVITIES: REVIEWER, OTHER

1999 Annual Society of Behavioral Medicine meeting.  
2002 "Brain function in substance dependent abused women", Minority Biomed. Research Support  
program, Meharry Med. College, Nashville, TN.  
October, 2005 Contract project for NIDA's international program to develop training modules on drug addiction  
(<http://nida.lecturehall.com/>); with Rita Strombeck, Ph.D., HealthCare Education Associates and Dr.  
John Harris, President of Medical Directions, Inc. (MDI, Virtual Lecture Hall [www.vlh.com](http://www.vlh.com)),  
Tucson, AZ.

### ACTIVE FUNDING

Source	Title (responsibility) and goals	Period	Direct costs	Status
LDRD #07-055 U.S. DOE	Neurocomputation at BCTN: developing novel computational techniques to study brain function in health and disease ( <b>PI</b> ).	10/06-09/08	\$300,000	Active
LDRD U.S. DOE	Neurogenomics: collaboration between the Biology Department and the Brookhaven Center for Translational Neuroimaging to investigate complex disease states ( <b>co-PI</b> ; N. Klein, PI). This project will establish role of genotype in psychopathologies of inhibitory control.	10/05-09/07	\$226,000	Active
1 R01 DA020949-01	CRCNS: Machine Learning Techniques to Analyze Dynamic fMRI of Inhibitory Control ( <b>co-PI/PD</b> ; D. Samaras, PI). Novel computer science algorithms are applied to fMRI data to study control.	09/05 – 8/10	\$1,716,457 (\$549,853)	Active
NIH (NIDA-K)	Role of Genotype and maternal smoking on brain MAOA ( <b>collaborator/mentee</b> ; J. Fowler, PI).	07/05 - 6/10	\$650,000	Active
NARSAD Young Investigator Award	Comorbid depression in cocaine-dependent adults: neurocognitive predictors of relapse ( <b>PI</b> ). This project uses fMRI to investigate the neurocognitive mechanisms underlying relapse in the dually diagnosed.	7/03 – 6/07	\$60,000	Active
NIDA; 1K23DA015517-01 Mentored Career Development Award	Behavioral correlates of fMRI response in cocaine users ( <b>PI</b> ). fMRI is used to study the neurocognitive mechanisms underlying salience attribution, response inhibition, and relapse in cocaine addiction.	9/02 - 6/07	\$732,324	Active

### COMPLETED FUNDING

Source	Title (responsibility) and goals	Period	Direct costs	Status
Laboratory Directed Research and Development (LDRD); # 04-063, DOE	Optimizing functional neuroimaging techniques to study brain function in health and disease states ( <b>PI</b> ). This project explores the application of simultaneous fMRI and ERP recordings to basic and clinical neuroscience.	2/04 – 7/06	\$375,400	Completed
Field Work Proposal (DE- AC02-98CH10886, MO- 66); DOE	Physiological and Functional MRI ( <b>co-PI</b> ; W. Rooney, PI). This project provides core support to studies of human disease that utilize the unique facilities on BNL's 4T MRI facility.	10/04 - 9/06	\$555,000	Completed
U.S. DOE KP1401040 MO-054	Physiological Imaging ( <b>Collaborator</b> ; N. Volkow, PI).	10/02 – 9/03	\$400,000	Completed
SB/BNL seed grant 79/1025459	Optimizing functional neuroimaging techniques to study the psychological mechanisms underlying violence in cocaine addiction ( <b>Co-PI</b> ; N. Squires, PI).	7/02 - 6/03	\$21,500	Completed
U.S. DOE DE-AC02-8CH10886	Physiological Imaging Studies in Nuclear Medicine ( <b>post-doc fellow</b> ; N. Volkow, PI).	9/99 - 4/02	\$720,000	Completed
NIAAA, NIH 5 T32 AA7574-5	Brain Imaging and Alcohol Abuse ( <b>post-doc fellow</b> ; R. Hitzemann, PI).	4/98 - 4/02	\$119,000	Completed

### DEPARTMENTAL AND INSTITUTIONAL SERVICE

2001 – 2002 Alternate member, Brookhaven National Laboratory Institutional Review Board.  
2002 - 2005 Member, Brookhaven National Laboratory Institutional Review Board.  
2004 Member, Medical Department Planning Committee, Brookhaven National Laboratory.

**CONFERENCE ACTIVITIES**

- 12/9/2003 **Organized and co-chaired a symposium** on “The Orbitofrontal Cortex in Drug Addiction: Role in Salience Attribution and Inhibitory Control”; the 42<sup>nd</sup> American College on Neuropsychopharmacology (ACNP) Annual Meeting, Puerto Rico. **Talk** title: Functional neuroimaging evidence for a modified function of the orbitofrontal cortex in human cocaine addiction: Involvement in inhibitory control and salience attribution.
- 5/1/2004 **Talk** for a symposium on “Stress and relapse in drug addiction: lessons from human neuroscience”; Society for Biological Psychiatry 2004; Chair: J. Neumaier; New York, NY. **Talk** title: Neuroimaging evidence for a modified function of the orbitofrontal cortex in human cocaine addiction: implications for stress induced relapse.
- 6/16/2004 **Goldstein RZ**, Cottone LA, Alia-Klein N, Leskovjan AC, Fowler JS, Wang GJ, Gur RC, Hitzemann R, Volkow ND. The neurobiology of anger in cocaine addiction: role of the lateral orbitofrontal gyrus. College on Problems of Drug Dependence, Puerto Rico.
- 10/2004 Alia-Klein N, **Goldstein RZ**, Tomasi D, Cottone LA, Wang G-J, Fowler JS, and Volkow ND. The word "NO" activates areas associated with negative emotion and inhibitory control. SFN, San Diego.
- 6/13/05 **Organized, chaired, and presented** in a symposium on “Inhibitory Control in fMRI Studies: Application of Basic Cognitive-Behavioral Research to the Study of Psychopathology”; Organization for Human Brain Mapping 2005, Toronto, Canada. **Talk** title: The Lateral Orbitofrontal Cortex and Inhibitory Control in Cocaine Addiction.”
- 06/2005 Fowler JS, Klein N, Kriplani A, Logan J, Craig IW, Telang F, **Goldstein RZ**, Volkow ND, Wang G-J. Brain MAO A Activity and MAO A Genotype in Healthy Male Subjects. Society of Nuclear Medicine, Annual Meeting, Toronto, Canada.
- 06/2005 Wang G-J, Alia-Klein N, Telang F, Ma Y, Jayne M, Zhu W, **Goldstein RZ**, Volkow ND, Fowler JS. Brain metabolic response to violent video presentation. Society of Nuclear Medicine, Annual Meeting, Toronto, Canada.
- 08/18/05 **Invited talk** for a NIDA/APA-sponsored symposium for the American Psychological Association Annual Meeting in Washington DC on "Neurobiological Aspects of Drug Addiction: Implications for Treatment". **Talk** title: Neuropsychological impairment in drug addiction and its association with prefrontal cortical activity.
- 10/15/06 **Goldstein RZ**, Woicik PA, Moeller SJ, Telang F, Wang G-J, Jayne MC, Wong C, Fowler JS, Volkow ND. Extending incentive sensitization theory to human self-report: wanting exceeds liking for drugs but not for other primary rewards in cocaine addiction. Slide presentation, SFN Annual Meeting, Atlanta GA.\*
- 10/18/06 **Invited talk** for a mini-symposium “Just say No” on the role of the prefrontal cortex in drug addiction; SFN; Chair: A. Levin, Co-Chair: JD. Jentsch; Atlanta, GA. **Talk** title: The prefrontal cortex in the I-RISA (Impaired Response Inhibition and Salience Attribution) syndrome of drug addiction.\*

**\*Selected by the Society for Neuroscience's Public Education and Communication Committee for a Neuroscience 2006 Press Book submission.**

**INVITED LECTURES**

- 3/5/02 “The Neuropsychology of Cocaine Addiction”, PSYCH 642, Neuropsychological Case Analysis and Integration, Drexel University, PA.
- 4/16/02 “The Neurobiology of Cocaine Addiction”, BME 201, Introduction to Biomedical Engineering, Department of Biomedical Engineering, SUNY Stony Brook, NY.
- 4/23/02 Promoting science and scientific careers, BNL Community Outreach Program (John Glenn High School, Elwood, NY).
- 10/28/03 “Optimizing Functional Neuroimaging to Study the Psychology of Drug Addiction and Other Problem Behaviors”, Department of Energy Workshop on Frontiers in Neuroimaging at DOE National Laboratories (Cambridge, MA).
- 11/14/03 “The Neuropsychomaging method at Brookhaven National Laboratory”, the quarterly Brookhaven Science Associates Science and Technology Steering Committee meeting.
- 1/7/04 “The Neuropsychomaging method: application to drug addiction”, Dept. of Psychology (Brain and Behavior), Univ. of Haifa, Israel.
- 5/2/04 “Functional neuroimaging in drug addiction”, the first Long Island Psychology Conference (supported by a small Psi Chi grant), organized by The Psi Chi Chapters at Dowling College, Hofstra University, LIU - C.W. Post College, and St. Joseph's College.

- 12/3/04 “Imaging the Addicted Human Brain”, in the International Conference on Counseling and Treating People of Color, Bermuda.
- 12/31/04 “Neuropsychomaging: applying neuropsychological tools to imaging cocaine addiction and aggression”, The Josph Sagol Neuroscience Center, Sheba Health Center, Ramat Gan, Israel.
- 04/01/05 “The emotional reward-related mechanisms that bias behavioral control in cocaine addiction”, Department of Psychology, New York University, Memory and Brain series, Cognitive Neuroscience Journal Club.
- 05/16/05 “Functional Neuroimaging of Human Cocaine Addiction”, the fifth Italian Society on Addiction conference, on "Addiction in Medicine and Society", Bari, Italy.
- 12/14/05 “The prefrontal cortex in the I-RISA syndrome of drug addiction”, Dept. of Psychology, Beer Sheva University, Emotion symposium.
- 01/09/06 “Value in cocaine addiction: using monetary reward in fMRI studies”, Center for Studies of Addiction, Treatment Research Center, Department of Psychiatry, University of Pennsylvania Health System.
- 12/24/06 “Functional neuroimaging in cocaine addiction”. Functional Brain Imaging Unit, Wohl Institute for Advanced Imaging, Tel-Aviv Sourasky Medical Center, Tel-Aviv, Israel.
- 02/05/07 “The Neuropsychology of Human Cocaine Addiction: A Synergy Between Non-Invasive Imaging Techniques and Computational Neuroscience to Develop New Biobehavioral Diagnostic Assays”, Department of Energy Workshop of Science in In Vivo Imaging at DOE National Laboratories (Cambridge, MA).

### INTERVIEWS IN MEDIA

- 11-12/02 BrainWork, the Neuroscience Newsletter of the Dana Foundation.
- 10/25/02 The North Shore Sun (“Brain Matter” by A. Clancy).
- 12/3/02 Brookhaven National Laboratory (“Addicts' Brains Work Harder to Control Behavior”, a press release).
- 08/06 A documentary on drug addiction for the RAI Italian National TV Channel, by M. Rosi of DocLab Productions.
- 10/15/06 Brookhaven National Laboratory (“Altered perception of reward in human cocaine addiction”, a press release).
- 10/17/06 Newsday (“How drug skew values” by J. Talan).
- 10/18/06 Reuters Health (“Cocaine alters brain cells, impairs impulse control” by M. Kerr).
- 01/12/07 The Leonard Lopate Show on WNYC, New York Public Radio:  
<http://www.wnyc.org/shows/lopate/episodes/2007/01>.
- 02/09/07 Congressional Quarterly Research (“Combating Addiction” by Marcia Clemmitt).
- 02/11/07 The San Francisco Chronicle (“Riddle of addiction lures researchers: Complex network of brain mechanisms underlies cravings” by Carl Hall).

### TEACHING AND SUPERVISION

- 1999 - present Coordinator of neuropsychological testing in Brookhaven National Laboratory.
- 2000 – present Supervisor, Science Undergraduate Laboratory Internships (SULI, an educational research training program for undergraduate students).
- 2001 Lecturer, Neuropsychological Assessment Graduate course (PSY 563), Dept. of Psychology, SUNY SB.
- 2001 – 2002 Supervisor, Internship program worksite, SUNY Potsdam.

## MENTORED STUDENTS AND PERSONNEL

Name and degree at training	Institution	Period	Training in Research	Current position
<b>M. Schullery, B.A.</b>	Bowdoin College	1999	Predoctoral student: summer research fellowship.	Psy.D. Student at Widener Univ. (Chester, PA)
<b>F. Bashan, B.S.</b>	Northeastern Univ.	2000	Predoctoral student	Psy.D. Student at Wright Institute (Berkeley, CA)
<b>L.A. Cottone, Ph.D.</b>	SUNY Stony Brook	2000 - 2005	Doctoral student and postdoc fellow	BNL Post-doctorate fellow
<b>S. S. Khalsa, B.A.</b>	SUNY Stony Brook	2001- 2002	Predoctoral student: recipient of DOE's Science Undergraduate Laboratory Internships (SULI, honors student).	M.D./Ph.D. student at Iowa Medical School
<b>Z. Jia, B.E.</b>	SUNY Stony Brook	2001	Doctoral student	SUNY SB biopsychology Ph.D. student
<b>S. Shamay, Ph.D.</b>	Haifa Univ., Israel	2002	Recipient: Fulbright Visiting Scholar Prog.	Post-doctorate at Haifa Univ. (Israel)
<b>D. D'Angelo</b>	SUNY Potsdam	2002	Predoctoral student: summer full-time internship (honors student).	RA at Nathan Klein Institute
<b>A. C. Leskovjan, B.S.</b>	SUNY Stony Brook	2002 - 2005	Doctoral student	SUNY SB Prog. in Biomed. Enegineering (PIBE) Ph.D. student
<b>S. Berry, B.A.</b>	SUNY Stony Brook	2002 - 2004	Master's student	SUNY SB biopsychology graduate student
<b>N. Alia-Klein, Ph.D.</b>	Columbia Univ.	2002 - 2005	Post-doctorate fellow	BNL Assistant Scientist
<b>V. Vassiliades, B.A.</b>	SUNY Stony Brook	2003	Research Assistant	CW Post psychology graduate student
<b>A. Wolf, B.S.</b>	SUNY Stony Brook	2003	Doctoral student, a lab rotation	SUNY SB PIBE Ph.D. student
<b>L. Zhang, M.S.</b>	SUNY Stony Brook	2003 - 2005	Doctoral student	SUNY SB Computer Sciences graduate
<b>D. Dellosh, B.A.</b>	SUNY Stony Brook	2004 - 2005	Predoctoral student: recipient of DOE's SULI.	Boston Univ. Medical School, Anatomy and Neurobiology Dept.
<b>C. Wong</b>	Miller Place High School	2004	Summer high school student: Community Summer Science Program	Columbia Univ.
<b>T. Maloney, Ph.D.</b>	SUNY Stony Brook	2004 -	Lab management and study coordination	same
<b>R. Bonanno, LMSW</b>	SUNY Stony Brook	2005	Research Assistant	SUNY SB School of Social Welfare graduate student
<b>R. McIntosh</b>	Medgar Evers College	2005	Predoctoral student: recipient of DOE's SULI.	
<b>T. Lukasik</b>	SUNY Stony Brook	2005 - 2006	Predoctoral student: recipient of DOE's SULI.	SUNY SB undergraduate student
<b>O. Yeliosof</b>	SUNY Stony Brook	2005 -	Predoctoral student: recipient of DOE's SULI.	SUNY SB undergraduate student
<b>P. A. Woicik, Ph.D.</b>	SUNY Stony Brook	2005 -	Post-doctorate fellow	same
<b>M. A. Parvaz, B.S.</b>	SUNY Stony Brook	2006 -	Doctoral student	SUNY SB PIBE Ph.D. student
<b>A. Panagopoulos, B.S.</b>	SUNY Stony Brook	2006 -	Doctoral student	SUNY SB Computer Sciences Ph.D. student
<b>S.T. Moeller, B.A.</b>	University of Michigan	2006	Doctoral student, spring-summer lab rotation	University of Michigan graduate student
<b>A.S. Gonul, M.D.</b>	Ege Univ. School of Medicine	2006 - 2007	Neuropsychomaging Research Fellowship	Associate Professor of Psychiatry
<b>S. Asensio, B.S.</b>	Universidad CEU Cardenal Herrera, Valencia, Spain.	2006 -	Neuropsychomaging Research Fellowship	Ph.D. student; Supervisor: Francisco Javier Romero, Ph.D.
<b>J. Dunning, M.S.</b>	SUNY Stony Brook	2007 -	Doctoral student	SUNY SB biopsychology Ph.D. student

## PUBLICATIONS

### PEER-REVIEWED JOURNALS

1. Raz S, **Goldstein R**, Hopkins TL, Lauterbach MD, Shah F, Porter CL, Riggs WW, MaGill LH, Sander CJ. (1994). Sex differences in early vulnerability to cerebral injury and their neurodevelopmental implications. Psychobiology, 22(3), 244-253.
2. **Goldstein R**, Harvey AS, Duchowny M, Jayakar P, Altman N, Resnick T, Levin B, Dean P, Alvarez L. (1996). Preoperative clinical, EEG, and imaging findings do not predict seizure outcome following temporal lobectomy in childhood. Journal of Child Neurology, 1(6), 445-450.
3. **Goldstein RZ**, Volkow ND, Wang G-J, Fowler JS, Rajaram S. (2001). Addiction changes orbitofrontal gyrus function: involvement in response inhibition. NeuroReport, 12(11), 2595-2599.
4. **Goldstein RZ**, Hurwitz BE, Llabre MM, Schneiderman N, Gutt M, Skyler JS, Prineas RJ, Donahue RP. (2001). Modeling preclinical cardiovascular risk for use in epidemiologic studies: Miami community health study. American Journal of Epidemiology, 154(8), 765-776.
5. **Goldstein RZ**, Giovannetti T, Schullery TM, Zuffante P, Lieberman JA, Robinson DG, Barr WB, Bilder RM. (2002). Neurocognitive correlates of response to treatment in formal thought disorder in first-episode schizophrenia. Neuropsychiatry, Neuropsychology, and Behavioral Neurology, 15(2), 88-98.
6. **Goldstein RZ**, Volkow ND. (2002). Drug Addiction and its Underlying Neurobiological Basis: Neuroimaging Evidence for the Involvement of the Frontal Cortex. American Journal of Psychiatry, 159(10), 1642-1652. **\*\*Cited >150 times during 2002 –2006.**
7. Volkow ND, Fowler JS, Wang G-J, **Goldstein RZ**. (2002). Role of Dopamine and the Frontal Cortex in Drug Addiction In Humans. Neurobiology of Learning and Memory, 78(3), 610-624.
8. **Goldstein RZ**, Volkow ND, Chang L, Wang G-J, Fowler JS, Depue RA, Gur RC. (2002). The Orbitofrontal Cortex in Methamphetamine Addiction: Involvement in Fear. NeuroReport, 13(17), 1-5.
9. Giovannetti T, **Goldstein RZ**, Schullery TM, Barr WB & Bilder RM. (2003). Semantic knowledge degradation does not explain reduced category fluency in first episode schizophrenia patients. Journal of the International Neuropsychological Society, 9, 384-393.
10. **Goldstein RZ**, Leskovjan AC, Hoff AL Hitzemann R, Bashan F, Khalsa SS, Wang G-J, Fowler JS, Volkow ND. (2004). Severity of neuropsychological impairment in drug addiction: association with metabolism in the brain reward circuit. Neuropsychologia, 42, 1447-1458. **\*\*The 5<sup>th</sup> most heavily downloaded articles from the journal, 7/05.**
11. **Goldstein RZ**, Alia-Klein N, Leskovjan AC, Fowler JS, Wang G-J, Gur RC, Hitzemann R, Volkow ND. (2005). Anger and depression in cocaine addiction: association with the orbitofrontal cortex. Psychiatry Res: Neuroimaging, 138, 13-22.
12. Volkow ND, Wang G-J, Begleiter H, Porjesz B, Fowler JS, Telang F, Ma Y, Wong C, Logan J, **Goldstein R**, Thanos PK, Alexoff D. (2006). High Dopamine D2 Receptors in Unaffected Members of Alcoholic Families: Possible Protective Factors. Archives of General Psychiatry, 63, 999-1008.
13. **Goldstein RZ**, Cottone LA, Jia Z, Maloney T, Volkow ND, and Squires NK. (2006). The effect of graded monetary reward on cognitive event-related potentials and behavior in young healthy adults. International Journal of Psychophysiology, 62, 272-279.
14. **Goldstein RZ**, Alia-Klein N, Tomasi D, Zhang L, Cottone LA, Maloney T, Telang F, Caparelli EC, Chang L, Ernst T, Samaras D, Squires NK, and Volkow ND. (2007). Decreased prefrontal cortical sensitivity to monetary reward is associated with impaired motivation and self-control in cocaine addiction. American Journal of Psychiatry, 164, 43-51.
15. **Goldstein RZ**, Tomasi D, Rajaram S, Cottone LA, Zhang L, Maloney T, Telang F, Alia-Klein N, and Volkow ND. (2007). Role of the anterior cingulate and medial orbitofrontal cortex in processing drug cues in cocaine addiction. Neuroscience, 144, 1153-1159.
16. Alia-Klein N, O'Rourke TM, **Goldstein RZ**, Malaspina D. (2007). Insight into illness and adherence to psychotropic medications predict violence severity in a forensic sample. Aggressive Behavior, 33, 86-96.
17. **Goldstein RZ**, Tomasi D, Alia-Klein N, Cottone LA, Zhang L, Telang F, and Volkow ND. (2007). Subjective sensitivity to monetary gradients is associated with frontolimbic activation to reward in cocaine abusers. Drug and Alcohol Dependence, 87, 233-240.
18. **Goldstein RZ**, Tomasi D, Alia-Klein N, Zhang L, Telang F, and Volkow ND. (2007). The effect of practice on a sustained attention task in cocaine abusers. Neuroimage, in press.
19. **Goldstein RZ**, Woicik PA, Lukasik T, Maloney T, Volkow ND. (2007). Drug Fluency: A Potential Marker for Current Cocaine Abuse. Drug and Alcohol Dependence, in press.

20. Fowler JS, Alia-Klein N, Kriplani A, Logan J, Williams B, Zhu W, Craig IW, Telang F, **Goldstein R**, Volkow ND, Vaska P, Wang G-J. (2007). Evidence that brain MAO A activity does not correspond to MAO A genotype in healthy male subjects. *Biological Psychiatry*, *in press*.

#### PEER-REVIEWED FULL-LENGTH PROCEEDINGS

21. Zhang L, Samaras D, Volkow ND, **Goldstein RZ**. (2005). Machine Learning for Clinical Diagnosis from Functional Magnetic Resonance Imaging (#169). In *IEEE Proc. of Computer Vision and Pattern Recognition*, **1**, 1211-1217.
22. Zhang L, Samaras D, Tomasi D, Alia-Klein N, Cottone LA, Leskovjan LC, Volkow ND, **Goldstein R**. (2005). Exploiting Temporal Information in Functional Magnetic Resonance Imaging Brain Data. In *Proc Medical Image Computing and Computer Assisted Intervention*, **8**, pp. 679-687.
23. Zhang L, Samaras D, Alia-Klein N, Volkow ND, **Goldstein RZ**. (2006). Modeling Neuronal Interactivity using Dynamic Bayesian Networks. In *Advances in Neural Information Processing Systems 18*, Y. Weiss, B. Scholkopf, and J. Platt, Eds. MIT Press, Cambridge, MA.

#### BOOK CHAPTERS

1. Hurwitz BE, **Goldstein R**, Massie CA, Llabre MM, Schneiderman N. (2000). Low-flow circulatory state and the pathophysiological development of cardiovascular disease: A model of autonomic mediation of cardiovascular regulation. In P.M. McCabe, N. Schneiderman, T. Field, & A. R. Wellens (Eds.), *Stress, Coping, and Cardiovascular Disease*. Lawrence Erlbaum Associates. Mahwah, NJ, pp 85-122.
2. **Goldstein RZ**, Alia-Klein N, Cottone LA, Volkow ND. (2006). Addiction and the Orbitofrontal Cortex. In D Zald & S Rauch (Eds.), *The Orbitofrontal Cortex*. Oxford University Press.
3. Volkow ND, Wang G-J, Fowler JS, **Goldstein RZ**. (2006). Imaging the Addicted Brain. In BK Madras, CM Colvis, JD Pollock, JL Rutter, D Shurtleff, & MV Zastrow (Eds.), *Cell Biology of Addiction*. The Cold Spring Harbor Laboratory Press.
4. **Goldstein RZ**, Alia-Klein N, Volkow ND. (2007). Drugs of Addiction: Neuroimaging in drug addiction. In L Squire, T Albright, F Bloom, F Gage & N Spitzer (Eds.), *The New Encyclopedia of Neuroscience*. Oxford University Press. *In press*.

#### CONFERENCE POSTER PRESENTATIONS

1. **Goldstein R**, Duchowny MS, Jayakar P, Resnick TJ, Altman N, Alvarez LA. (1993). Predictors of seizure relief after temporal lobectomy in children. *Epilepsia*, **34** (suppl 6): 102.
2. Duchowny MS, Harvey AS, **Goldstein R**, Bruce JH, Jayakar P, Resnick TJ, Alvarez LA, Altman N. (1994). Cortical dysplasia in children with intractable partial epilepsy. *Epilepsia*, **35** (suppl 8): 14.
3. **Goldstein R**, Harvey, A. S., Duchowny, M. S., Bruce, J. H., Jayakar, P., Resnick, T. J., Altman, N., & Alvarez, L. A. (1994). Clinical correlates of abnormal columnar organization in children with chronic focal epilepsy. *Society for Neuroscience Abstracts*, **20**: 1494.
4. Harvey AS, Duchowny MS, **Goldstein R**, Bruce JH, Jayakar P, Resnick TJ, Alvarez LA, Altman N. (1994). Developmental neuropathology in children with intractable partial epilepsy. *Annals of Neurology*, **36**: 487.
5. **Goldstein R**, Llabre MM, Donahue RP, Schneiderman N, Prineas RJ, Hurwitz BE. (1997). A model of autonomic regulation of cardiovascular function in White, Black, and Cuban men. *Annals of Behavioral Medicine*, **19**, S156.
6. **Goldstein R**, Llabre MM, Donahue RP, Milanovich JR, Kibler JL, Motivala SJ, Vallenilla CT, Stern N, Prineas RJ, Schneiderman N, Hurwitz BE. (1998). Cross-validation of a model of autonomic and cardiovascular function in men and women. *Annals of Behavioral Medicine*, **20**(suppl), S86.
7. Zuffante P, Gunduz H, Wu H, Alvir J, Robinson D, Szeszko P, Crandall D, Reiter G, Bates J, Goldman R, **Goldstein R**, Ashtari M, Lieberman J, Bilder R. (1999). Superior temporal gyrus grey matter volumes and neuropsychological functions in first episode schizophrenia. *Schizophrenia Research* **36** (1-3), 215.
8. Baker N, Brownley KA, Llabre MM, Gutt M, **Goldstein R**, Schneiderman N, Donahue RP, Hurwitz BE. (2000). Miami Community Health Study: Cardiovascular Reactivity in African-American, Cuban-American and White Men and Women. *Annals of Behavioral Medicine*, **22** (suppl), S180.
9. Davis CL, Llabre M, **Goldstein R**, Donahue R, Prineas R, Hurwitz BE, Schneiderman N. (2000). Differential LDL-SBP Relationships in Black and White Men. *Annals of Behavioral Medicine*, **22** (suppl), S101.
10. Giovannetti T, **Goldstein RZ**, Schullery M, Lieberman J, Robinson D, Bilder RM, Barr WB (2001). First episode schizophrenia patients show preserved semantic knowledge. *Journal of the International Neuropsychological Society* **7**(2), 163.
11. **Goldstein R**, Giovannetti T, Schullery M, Wu H, Lieberman J, Robinson D, Barr WB, Bilder RM (2001). Psychiatric

and neuroanatomical correlates of cognitive function in schizophrenia. Journal of the International Neuropsychological Society 7(2), 162-163.

12. **Goldstein RZ**, Giovannetti T, Schullery M, Lieberman J, Robinson D, Barr WB, Bilder RM. (2001). Predicting formal thought disorder from semantic vs. executive dysfunction in first-episode schizophrenia. Schizophrenia Research 49 (1-2 Suppl.), 107.
13. **Goldstein RZ**, Volkow ND, Bashan F, Wang G-J, Fowler JS. Addiction changes orbitofrontal function: role in response inhibition. Recruitment by bottom-up processes? Society for Neuroscience annual meeting, Nov 2001, San Diego, CA.
14. **Goldstein RZ**, Cottone LA, Jia J, Leskovjan AC, Volkow ND, Squires NK. The effect of graded monetary reward on event-related potentials and behavior: relevance to drug addiction. Cognitive Neuroscience Society, Annual Meeting, March, 2003.
15. Leskovjan AC, **Goldstein RZ**, Volkow ND, Wang G-J, Fowler JS. Use of the Rey-Osterrieth Complex Figure to identify cocaine-addicted individuals with frontal lobe dysfunction. Cognitive Neuroscience Society, Annual Meeting, March, 2003.
16. D'Angelo D, **Goldstein RZ**, Leskovjan AC, Volkow ND. The abbreviation of neuropsychological testing for clinical research. Cognitive Neuroscience Society, Annual Meeting, March, 2003.
17. **Goldstein RZ**, Berry SA, Leskovjan AC, Caparelli E, Tomasi D, Chang L, Telang F, Volkow ND, Squires NK, and Ernst T. Money activates reward circuits in cocaine addiction: A functional MRI study at 4 T. International Society for Magnetic Resonance in Medicine, 11<sup>th</sup> Meeting, July, 2003.
18. **Goldstein RZ**, Volkow ND, Tomasi D, Caparelli EC, Berry SA, Leskovjan AC, Telang F, Chang L, Ernst T. A modified role for the orbitofrontal cortex in attribution of salience to monetary reward in cocaine addiction: an fMRI Study at 4 T. Human Brain Mapping Annual Meeting, Budapest, Hungary, June 14, 2004.
19. **Goldstein RZ**, Leskovjan AC, Hoff AL, Hitzemann R, Bashan F, Khalsa SS, Wang GJ, Fowler JS, Volkow ND. Severity of neuropsychological impairment in cocaine addiction: association with metabolism in the brain reward circuit. College on Problems of Drug Dependence, Puerto Rico, June 12-17, 2004.
20. Alia-Klein N, O'Rourke T, **Goldstein RZ**, Cottone LA, Volkow ND. Cannabis interacts with specific psychotic symptoms to increase severity of violent behavior in individuals with psychotic disorders. College on Problems of Drug Dependence, Puerto Rico, June 12-17, 2004.
21. **Goldstein RZ**, Tomasi D, Cottone LA, Telang F, Caparelli EC, Zhang L, Leskovjan AC, Chang L, Ernst T, and Volkow ND. Loss of sensitivity in appraising relative saliency of money in drug abusers is associated with disrupted activity in orbitofrontal cortex. Society for Neuroscience, San Diego, October 2004.
22. Alia-Klein N, **Goldstein RZ**, Tomasi D, Zhang L, Cottone L, Fowler J, Wang GJ, Volkow ND. Role of Genotype in Cingulate Function and Inhibitory Control: a Functional Magnetic Resonance Imaging (fMRI) Study. Cognitive Neuroscience Society, Annual Meeting, New York, NY, April, 2005; in Journal of Cognitive Neuroscience, S33-34.
23. Leskovjan AC, Tomasi D, Zhang L, Cottone LA, Telang F, Caparelli EC, Samaras D, Chang L, Ernst T, Volkow ND, and **Goldstein RZ**. Modulation of neural response in the prefrontal cortex and cerebellum by monetary reward and instrumental response on a GO/NO-GO task. Cognitive Neuroscience Society, Annual Meeting, New York, NY, April, 2005; in Journal of Cognitive Neuroscience, S36.
24. Delosh D, Leskovjan AC, Cottone LA, Alia-Klein N, and **Goldstein RZ**. Cocaine Addiction is associated with impaired learning on the Wisconsin Card Sort Task: findings in high functioning individuals. Cognitive Neuroscience Society, Annual Meeting, New York, NY, April, 2005. in Journal of Cognitive Neuroscience, S226.
25. Tomer R, **Goldstein RZ**, Wang G-J, Christopher W, Volkow ND. Incentive motivation is associated with striatal dopamine asymmetry. Cognitive Neuroscience Society, Annual Meeting, New York, NY, April, 2005. in Journal of Cognitive Neuroscience, S167.
26. Alia-Klein N, **Goldstein RZ**, Tomasi D, Zhang L, Cottone L, Fowler J, Volkow ND, Wang GJ. Increased amygdala and decreased anterior cingulate responses to a signal to stop behavior (emphatic vocalizations of the word "No!") in aggression-prone individuals. Human Brain Mapping Annual Meeting, Toronto, Canada, June, 2005.
27. Cottone L.A., Maloney T., Delosh D., Leskovjan A., Alia-Klein N., Telang F., Squires N.K., Fowler J.S., Volkow N.D., **Goldstein R.Z.** The effect of monetary reward on event-related potentials in cocaine addiction. Society for Neuroscience, Washington, 2005.
28. **Goldstein RZ**, Delosh D, Cottone LA, Leskovjan AC, Alia-Klein N, Fowler JS, Wang GJ, Telang F, Maloney T, and Volkow ND. Relationship between cognitive functioning and recent cocaine use: evidence from neuropsychological testing and urine toxicology. Society for Neuroscience, Washington, 2005.
29. Zhang L, Samaras D, Alia-Klein N, Cottone L, Maloney T, Leskovjan A, Tomasi D, Fowler J, Volkow ND,

**Goldstein RZ.** Using Advanced Computational Methods to Analyze Neuroimaging Data to Diagnose Psychopathology. Society for Neuroscience, Washington, 2005.

30. **Goldstein RZ**, Tomasi D, Cottone LA, Zhang L, Alia-Klein N, Maloney T, Telang F, Caparelli EC, Swanson JM, Volkow ND. Decreased corticolimbic response to monetary reward in cocaine addiction: Association with motivation and self-control. *Neuropsychopharmacology* 30: S143-S144 Suppl. 1; ACNP, Hawaii, December 2005.
31. **Goldstein RZ**, Tomasi D, Rajaram S, Cottone LA, Zhang L, Maloney T, Telang F, Alia-Klein N, and Volkow ND. Role of the anterior cingulate cortex in negative valence attribution and accuracy on a drug Stroop task in cocaine addiction. Human Brain Mapping, Florence, Italy, 2006.
32. D. Tomasi, R.Z. **Goldstein**, F. Telang, T. Maloney, E.C. Caparelli, N.D. Volkow. Cocaine abusers have widespread disruption in brain activation patterns to a working memory task. Human Brain Mapping, Florence, Italy, 2006.
33. Alia-Klein N, **Goldstein RZ**, Tomasi D, Zhang L, Telang F, Wang GJ, Fowler JS, Volkow ND. What is in a word? *No* versus *Yes* differentially activate the lateral orbitofrontal cortex. Human Brain Mapping Annual Meeting, Florence, Italy, 2006.
34. Alia-Klein N, Kriplani A, Logan J, Telang F, Wang GJ, Craig I, Williams B, Tomasi D, **Goldstein RZ**, Ma J, Volkow ND, Fowler JS. Divergent Associations between MAO A Genotype on Anterior Cingulate Metabolism, MAO A levels and Cognitive Control. Society of Nuclear Medicine, Annual Meeting, San Diego, CA, June, 2006.
35. **Goldstein RZ**, Woicik PA, Maloney T, Lukasik T, Yeliosif O, Alia-Klein N, Wang G-J, Fowler JS, Wong C, Volkow ND. Drug fluency: A Potential Marker for Substance Abuse. College on Problems of Drug Dependence Annual Meeting, 2006.
36. Woicik PA, Bonanno R, Alia-Klein N, Wang G-J, Wong C, Fowler JS, Volkow ND, **Goldstein RZ**. Does Personality Predict Performance on Behavioral Tasks of Inhibitory Control in Cocaine Abusers? College on Problems of Drug Dependence Annual Meeting, 2006.
37. Parvaz MA, Maloney T, Tomasi D, Alia-Klein N, Telang F, Wang G-J, Volkow ND, **Goldstein RZ**. A multimodal analysis of decreased neural sensitivity to reward in cocaine addiction. BioMedical Engineering Society, Annual Meeting, Chicago, IL, October, 2006.
38. **Goldstein RZ**, Alia-Klein N, Tomasi D, Rajaram S, Henn F, Volkow ND. Testing the I-RISA (Impaired Response Inhibition and Salience Attribution) model in cocaine addiction using a newly developed drug Stroop task for fMRI. ACNP Annual Meeting, FL, 2006.
39. Gonul AS, Woicik PA, Tomasi D, Alia-Klein N, Maloney T, Wong C, Wang G-J, Sedler M, Volkow ND, **Goldstein RZ**. Increased gray matter volume in the lateral orbitofrontal cortex of current cocaine users. New York Academy of Science, Linking Affect to Action: Critical Contributions of the Orbitofrontal Cortex , 2007. \*Selected for a monetary and panel fellowship.
40. Woicik PA, Westmaas JL, Conrod PJ, **Goldstein RZ**. An Examination of Disinhibitory Personality Risk for Alcohol Use/Abuse. Research on Substance Abuse 2007, accepted.

#### **Abstracts for DOE's Science Undergraduate Laboratory Internships**

41. Khalsa SS, **Goldstein RZ**, Bashan F, Fowler JS, Volkow ND. The Neuropsychology of Cocaine Addiction: Preliminary results from Brookhaven National Laboratory. US Department of Energy "Journal of Undergraduate Research", Volume 2, 2002.
42. Delosh D and **Goldstein RZ**. Motor Functioning in Drug Addicted Individuals: Chronic and Past Cocaine and Alcohol Abusers. US Department of Energy "Journal of Undergraduate Research", Volume V, 2005.
43. Delosh D and **Goldstein RZ**. The Effects of Urine Toxicology on Motor Performance in Cocaine Addicted Individuals. US Department of Energy "Journal of Undergraduate Research", Volume V, 2005.
44. Yeliosof O, Alia-Klien N, **Goldstein RZ**. US Department of Energy "Journal of Undergraduate Research", Volume VI, 2006.
45. Lukasik T, Woicik P, **Goldstein RZ**. US Department of Energy "Journal of Undergraduate Research", Volume VI, 2006.